



BOSCH

Plant-Specific Packaging Appendix:

Supplementing ROBERT BOSCH GMBH
Central Supplier Logistics Manual.

Robert Bosch Charleston



“Competing Successfully”

Our Customers demand flexible and cost efficient Logistics to help them meet their targets. We at Robert Bosch Charleston – ChP need to in turn work closely with our supplier base to optimize our Logistics processes.

To meet these standards in the ever-present competitive environment, we must achieve the following goals:

1. Reduction of logistics costs.
2. Creation of "zero error logistics"
3. Customer orientation and flexibility through a consistently high level of readiness for delivery
4. Optimization of supplier logistics
5. Optimization of stock

In the first step toward optimized logistics, processes must be standardized to achieve high reliability through transparent/unitized Packaging and labeling.

We see this Plant specific appendix as an active supplement to the North American Packaging guideline (NAM), and as a first step toward "lean logistics" which, with your suggestions for improvement, will contribute to its further development.

A prerequisite for optimized logistics (in terms of all partners) is that the guidelines and standards specified in this manual are met. Therefore, immediately complying with and implementing the processes described is an essential prerequisite for concluding new contracts. This will also be taken into consideration in regular supplier evaluations. Our contact people are happy to answer your questions and listen to your suggestions in driving and achieving this improvement.

Rules for packaging design

For safe, error-free and efficient logistics processing, ChP defines the delivery and packaging status of the goods bindingly in the form of a Packaging Data Sheet (PDS).

1. Suppliers are expected to comply with the Latest agreed version of the **Bosch Supplier Logistics handbook** and the **North American Packaging Guidelines** available for their perusal a the following link:

<https://www.bosch.com/company/supply-chain/information-for-business-partners/>

LOGISTICS REGULATIONS AND
STANDARDS→REGIONAL REGULATIONS→US
PACKAGING INSTRUCTIONS.

2. If a supplier is already delivering to another Bosch location or is released to do so in Bosch designed one-way packaging they are expected to use the same design for deliveries to ChP (including the prescribed target packing quantity) as described in the **IPN Packaging Guideline**.

NOTE: Exceptions might be made if it can be proven the packaging would cause of a quality or safety hazard to the components.

3. Per North American PDS Guidelines:

“Bosch Authorization does not exempt the supplier from their responsibility to deliver parts free from damage or corrosion”

This parts list is coordinated and transmitted to the suppliers as part of the document exchange. Non-compliance with the packaging specification will lead to a complaint.

4. Upon receiving a Bosch approved PDS suppliers are expected to comply with the agreed proposals for the next

available shipment. An exemption may be requested to ChP/LOD and ChP/LOP.

Standards for the use of packaging materials:

1. Intercontinental shipments must be [VDA 4525](#), [VDA 4530](#) compliant for deliveries to NAM.
2. **Pallets** must be fault-free and cartons not nailed down to them.
 - A. Packed out pallets must adhere to VDA 4525, supplier should use the VDA LT-1110 pallet (1140 x 980 mm), which is optimized for intercontinental transportation rather than the European standard pallet size (1200x800).
 - B. The recommended system might also require a GLT slip cover (GL-SD-1110).
 - C. Packed-out-pallets cannot exceed 44in in height and must permit double stacking per the NAM Packaging Guidelines. Exceptions will require written confirmation by LOD.
 - D. Use of “filling material” WITHIN THE PALLET is not permitted.
 - E. When using an Over-pack ensure it is appropriately sized to prevent pallet contents from shifting in transit..
3. **Trays and Totes** Suppliers are responsible to ensure their parts fit into the Bosch designed tote/tray (marked appropriately) and in its absence use generically designed trays.
 - A. To avoid warping, Trays should be made of heat resistant poly-styrene (PS) or acrylonitrile butadiene styrene (ABS) rather than PET.
 - B. The use of foam dividers between layers/trays to prevent them being dislocated or disoriented in transit is encouraged.

- C. Banding/Consolidation of tote contents: so they are easily removable and re-packable (advisable to strap and/or bag trays in a pack together). Avoid excessive taping.
- D. Suppliers are responsible to recalibrate tray dies frequently to ensure they meet specifications as originally defined in PDS (if RB-SNR design should be met).
- E. Supplier are expected to limit their expendable tote packaging to under 0.5in of the following standard tote sizes allowing for their repack for lineside delivery.

	W/L/H	in	mm	ft
AA	W	4	101.6	0.33
	L	7.5	190.5	0.63
	H	3	76.2	0.25
A	W	12	304.8	1.00
	L	7	177.8	0.58
	H	5	127	0.42
B	W	12	304.8	1.00
	L	15	381	1.25
	H	5	127	0.42
Euro B	W	11.5	292.1	0.96
	L	15.5	393.7	1.29
	H	7	177.8	0.58
C	W	12	304.8	1.00
	L	15	381	1.25
	H	7	177.8	0.58
Euro C	W	11.5	292.1	0.96
	L	15.5	393.7	1.29
	H	11	279.4	0.92
D	W	24	609.6	2.00
	L	15	381	1.25
	H	7	177.8	0.58
E	W	24	609.6	2.00
	L	15	381	1.25
	H	14	355.6	1.17

4. To prevent contamination, all contents in corrugated boxes should be bagged unless exempted by LOD. Items in returnable containers must be bagged at discretion of LOD.
5. Per the NAM guidelines, all bagged items must have an identification label on them.
6. Rust preventative measures and ESD protection are shared per design documents by the Bosch Engineering and Development team. Compliance is mandatory and changes require strict agreement and approval from the Bosch Engineering dept.
7. Material combinations or connections are forbidden, i.e. after use, simple reparability must be ensured for recycling or appropriate disposal (e.g. iron clamps or nails in wood, do not nail down cartons on pallets)
8. Weight limits per packaging unit must be met:
 - A. Wooden pallets (in exceptional cases) 1000 kg (2200. lbs)
 - B. Cardboard packaging: individual cartons 10 kg (22. lbs)

NOTE: Due to certain internal processes that could be considered ergonomically unsafe for employees, Bosch reserves the right to lower the upper weight limit for plastic containers or cardboard packaging to less than 10 kg (22lbs).

9. Only easy-to-remove adhesives may be used when sealing or packing out so as not to pose a quality risk when un-packing.